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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,523	05/20/2004	Yoshinori Uzuka	1075.1263	5577

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EXAMINER	
NINO, ADOLFO	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/849,523	UZUKA ET AL.	
	Examiner	Art Unit	
	Adolfo Nino	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 10-21* is/are rejected.

7)☒ Claim(s) *4-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 10-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Huffman (US 4,480,289).

Regarding claim 1 (currently amended), Huffman discloses a spacer (10, 12) for attaching onto a printed wiring board (2) to which is fixed an electronic component (4) having a component package, on one of whose surfaces a connection terminal (6, 6') is arranged, said spacer (10, 12) comprising an elastic member (10, 12) with no ends thereof (fig. 2), said elastic member (10, 12) being detachably attached to the printed wiring board in such a way as to enclose the electronic component to seal a gap between the electronic component and the printed wiring boar and said elastic member being attached to and detached from the printed wiring board by exploiting elastic deformation of said elastic member.

Regarding claim 2, Huffman discloses a spacer (10, 12) as set forth in claim 1, wherein said elastic member (10, 12) has a frame-like shape (fig. 2) with an inner outline which is similar in shape to an outline of the component package (fig. 2), and is smaller in length than the outline of the component package (fig. 2), and is thinner than the gap between the electronic component and the printed wiring board (referring to 12 in fig. 2).

Regarding claim 3, Huffman discloses a spacer (10, 12) as set forth in claim 1, wherein said elastic member (10, 12) has a frame-like shape with an inner outline which is similar in shape and length to an outline of the component package (fig. 2) and is thinner than the gap between the electronic component and the printed wiring board (fig. 2), and wherein the frame-like shape has a pair of hook portions (not marked, but it would be the portion of 10 that is between the electronic component and the board) for projecting into the gap between the electronic component and the printed wiring board (fig. 1), the hook portions (10) being provided on the inner outline of the frame-like shape to oppose to each other (fig. 1).

Regarding claim 10, Huffman discloses a spacer (10, 12) as set forth in claim 1, wherein said elastic member (10, 12), while in contact with the printed wiring board (2), is attached around the component package by pressure due to the elastic deformation of said elastic member (col. 3).

Regarding claim 11, Huffman discloses a spacer (10, 12) as set forth in claim 10, wherein said elastic member (10, 12) has a cross-sectional shape with a projecting portion (part of 10) thereof, which projects into the gap between the electric component and the printed wiring board when said elastic member is attached to the printed wiring board (fig. 1).

Regarding claim 12 (currently amended), Huffman discloses a spacer (10, 12) as set forth in claim 1, wherein said elastic member (10, 12) has a frame-like shape with an inner outline which is similar in shape to an outline of the component package (fig. 2), and said elastic member (10, 12), while in contact with the printed wiring board (figs. 1,

2), is attached around the component package by pressure due to the elastic deformation of said elastic member (col. 3), and wherein the frame-like shape has a catch protrusion (part of 10 between the component and board) on its inner outline (fig.1), which catch protrusion protrudes into the gap between the electronic component and the printed wiring board (fig. 1).

Regarding claim 13 (currently amended), Huffman discloses a printed circuit board (2), comprising: an electronic component (4) having a component package (4), on one of whose surfaces a connection terminal is arranged (fig. 1); a printed wiring board (2) to which said electronic component (4) is fixed; and a spacer (10, 12) formed as an elastic member (col. 3) with no ends thereof detachably attached to said printed wiring board in such a way as to enclose said electronic component to seal a gap between said electronic component and said printed wiring board (fig. 2), said elastic member (10, 12) being attached to and detached from said printed wiring board by exploiting elastic deformation of the elastic member (col. 3).

Regarding claim 14, Huffman discloses a printed circuit board (2) as set forth in claim 13, wherein the elastic member (10, 12) has a frame-like shape (fig. 1) with an inner outline which is similar in shape to an outline of the component package (fig. 1), and is smaller in length than the outline of the component package, and is thinner than the gap between the electronic component and said printed wiring board (fig. 1).

Regarding claim 15, Huffman discloses a printed circuit board (2) as set forth in claim 13, wherein the elastic member (10, 12), while in contact with said printed wiring

board (fig. 1), is attached around the component package by pressure due to the elastic deformation of the elastic member (col. 3).

Regarding claim 16 (currently amended), Huffman discloses a printed circuit board (2) as set forth in claim 13, wherein the elastic member (10, 12) has a frame-like shape with an inner outline which is similar in shape to an outline of the component package (fig. 1), and the elastic member (10, 12), while in contact with said printed wiring board (2), is attached around the component package by pressure due to the elastic deformation of the elastic member (col. 3), and wherein the frame-like shape has a catch protrusion (part of 10 between the component and the board) on its inner outline, which, catch protrusion (part of 10 between the component and the board) protrudes into the gap between the electronic component and said printed wiring board (fig. 1).

Regarding claim 17 (currently amended), Huffman discloses an electronic equipment (fig. 1), comprising a printed circuit board (2) which includes: an electronic component (4) having a component package, on one of whose surfaces a connection terminal is arranged; a printed wiring board (2) to which the electronic component is fixed (figs. 1, 2); and a spacer (10, 12) formed as an elastic member (col. 3) with no ends thereof detachably attached to the printed wiring board in such a way as to enclose the electronic component to seal a gap between the electronic component and the printed wiring board (fig. 1), the elastic member (10, 12) being attached to and detached from the printed wiring board by exploiting elastic deformation of the elastic member.

Regarding claim 18, Huffman discloses an electronic equipment as set forth in claim 17, wherein the elastic member (10, 12) has a frame-like shape with an inner outline which is similar in shape to an outline of the component package (fig. 1), and is smaller in length than the outline of the component package (fig. 1), and is thinner than the gap between the electronic component and the printed wiring board (fig. 1).

Regarding claim 19, Huffman discloses an electronic equipment as set forth in claim 17, wherein the elastic member (10, 12), while in contact with the printed wiring board, is attached around the component package by pressure due to the elastic deformation of said elastic member (col. 3).

Regarding claim 20 (currently amended), Huffman discloses an electronic equipment as set forth in claim 17, wherein the elastic member (10, 12) has a frame-like shape (fig. 1) with an inner outline which is similar in shape to an outline of the component package, and the elastic member (10, 12), while in contact with the printed wiring board, is attached around the component package by pressure due to the elastic deformation of the elastic member (col. 3), and wherein the frame-like shape has a catch protrusion (part of 10 between the component and the board) on its inner outline, which catch protrusion protrudes into the gap between the electronic component and the printed wiring board (fig. 1).

Regarding claim 21 (new), Huffman discloses an apparatus comprising: an electronic component (4); a printed wiring board (2) from the electronic component to form a gap therebetween; and a spacer (10, 12) selectively attached to the printed wiring board by an elastic deformation thereof to seal the gap.

Allowable Subject Matter

Claims 4-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art does not disclose, teach or suggest, alone or in combination, the combination therein of "wherein the frame-like shape has an outer outline greater in length than the outline of the component package, and wherein the frame-like shape has at least one slit thereon extending from the inner outline toward the outer outline of the frame-like shape" (this combination found in claims 4 and 5).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 10-20 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (571) 272-1981. The examiner can normally be reached on M-F (7:30-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AN

Dean A. Reichard 5/27/05

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